

# Microfiltration cassettes with Supor™ membrane

## CENTRAMATE™ AND CENTRASETTE™ II CASSETTES

Our tangential flow filtration (TFF) cassettes with Supor™ polyethersulfone (PES) membrane are optimized for microfiltration applications, easily scaled, and suited to a broad range of cleaning options. They are available in two formats, Centramate™ and Centrasette™ II cassettes (Fig 1), and in a range of pore sizes, from 0.1 to 0.65 µm, to meet most application requirements.

### Features and benefits

- Low non-specific adsorption due to its hydrophilic chemistry which leads to higher product yields.
- Wide range of membrane pore sizes to optimize the process.
- Compatible with acids, bases, oxidizing agents, and a variety of other cleaning agents to fit different application needs.
- Available in different screen formats to suit a wide range of applications.

### Applications

The modified PES membrane has a uniform depth structure and is optimized for microfiltration TFF applications, including harvest, concentration, and clarification of cell cultures and fermentation broths. It is particularly well-suited for applications including harvesting bacterial, mammalian, and insect cells; separating red blood cells from hemoglobin; and for clarifying yeast broth and bacterial lysates.

The medium screen format is intended for:

- Clarified solutions
- Low to medium viscosity
- Final concentrations < 30% (300 mg/mL)

And the suspended screen format is for:

- Solutions containing particles, cells, and cell debris in solution
- Solutions that are highly viscous and highly concentrated



## Centramate microfiltration cassettes

Centramate microfiltration cassettes with Supor membrane are designed for laboratory-scale and development applications in TFF. The cassettes are available in a range of channel formats to meet most application requirements. The cassettes are supplied with the same construction materials as used in the Centrasette membrane cassettes.

Applications developed on a Centramate cassette with Supor membrane can be easily scaled up, either by adding cassettes to a Centramate holder, or by switching to the Centrasette cassette format with identical path length and channel format.

Refer to the tables below for a list of membrane and formats available for Centramate cassettes.

## Centrasette II microfiltration cassettes

Centrasette II microfiltration cassettes with Supor membrane, available in the same screen formats as the Centramate cassettes, have been widely used for many years in various process applications including concentration and diafiltration in the biopharmaceutical industry. They are available with membrane areas of 0.5 m<sup>2</sup> and 2.5 m<sup>2</sup> (5.4 ft<sup>2</sup> and 27 ft<sup>2</sup>). Larger cassette areas simplify installation in large TFF systems, reducing the number of gaskets required, and minimizing the risk of leakage.

We continue to improve our membrane cassettes to meet the more rigid requirements of today's applications.

## Specifications

### Cassette channel configurations

Our microfiltration cassettes with Supor membrane are available in medium and suspended screen channel formats to best meet the specific requirements of each application.

**Table 1.** Selection criteria for cassette channel configuration

Channel configuration	Selection criteria
Medium screen	Clarified solutions, low to medium viscosity Final concentration < 30% (300 mg/mL)
Suspended screen / open channel	Particles / cells / cell debris in solution High viscosity

**Table 2.** Materials of construction

Membrane	Supor microfiltration-optimized polyethersulfone
Encapsulant	Polyurethane
Screens	Polyester
Spacers	Polyolefin / PES

Cassettes pass current USP biological safety tests for class VI plastics at 70°C.

## Storage agents

Our microfiltration cassettes with Supor membrane are shipped wet, in liquid containing a humectant and bactericidal storage solution. This solution consists of 15% to 20% glycerin, and 0.05% to 0.1% sodium azide.

The storage solution must be removed and the cassette flushed well with water prior to use to prevent product contamination.

## Complementary product

Cassette holders are available, please contact us for details.

## Documentation

Each microfiltration cassette with Supor membrane has a unique serial number for full traceability. Each cassette is supplied with:

- Certificate of quality
- Membrane cassette care and use procedures
- Material safety data sheet (MSDS) for cassette preservative
- Two platinum-cured silicone gaskets

## Ordering information

How to order microfiltration cassettes with Supor membrane:

1. Choose a µm rating code from Table 3 (e.g., **M20** = 0.2 µm)
2. Choose a format code from Table 4 (e.g., **C11** or **F06**)

Typical example of product code: **PS M20 C11**

**PS**

**Table 3.** Choose a µm rating code: available micron ratings for microfiltration Supor membranes

Pore size (µm)	Product code
0.1	M10
0.2	M20
0.45	M45
0.65	M65

**Table 4.** Choose a format code: cassette and screen formats

Cassette format	Nominal area	Medium screen code	Suspended screen code
Centramate	0.01 m <sup>2</sup>	C12P1	C11P1
	0.02 m <sup>2</sup>	C12P2	C11P2
	0.1 m <sup>2</sup>	C12	C11
Centrasette II	0.5 m <sup>2</sup>	F06	F07
	2.5 m <sup>2</sup>	F26	F27



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